

REMARKS

This Amendment responds to the Office Action dated March 16, 2010 in which the Examiner objected to claim 17, rejected claim 17 under 35 U.S.C. § 112, second paragraph and rejected claims 17-28 under 35 U.S.C. § 103.

Applicants respectfully request the Examiner acknowledge Applicants claim for priority by indicating box 12a3 on PTOL-326.

As indicated above, claim 17 has been amended to correct minor informalities. Therefore, Applicants respectfully request the Examiner withdraws the objection to claim 17.

As indicated above, claim 17 has been amended in order to more particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. A similar amendment has been made to claim 23. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claim 17 under 35 U.S.C. § 112, second paragraph.

As indicated above, claim 17 and 23 have been amended in order to make explicit what is implicit in the claims. The amendment is unrelated to a statutory requirement for patentability. Additionally, claim 18 has been amended to correspond to the amendment made to claim 17. The amendment is unrelated to a statutory requirement for patentability and does not narrow the literal scope of the claims.

Claim 17 claims a chemical analytic apparatus and claim 18 claims the method of the chemical analytic apparatus. The apparatus and method include conveying a droplet, in which magnetic ultrafine particles are mixed, due to attraction of the magnetic ultrafine particles to a magnetic field generated by moving a conveyance means/unit in a moving direction.

By moving a conveyance means/unit in a moving direction while applying a magnetic field in order to convey droplets mixed with magnetic ultrafine particles, as claimed in claims 17

and 23, the claimed invention provides a chemical analytic apparatus and method which can be miniaturized, making it a low-cost and portable apparatus. The prior art does not show, teach or suggest the invention as claimed in claims 17 and 23.

Claims 17-19 and 21-28 were rejected under 35 U.S.C. § 103 as being unpatentable over *Blankenstein* (U.S. Patent No. 6,432,630) in view of *Ward, et al.* (U.S. Publication No. 2004/0018611).

Blankenstein appears to disclose in Figure 1 a micro flow system 1 having 3 inlets and 2 outlets. A sample 9 containing particles enters the separation flow channel 5 through a central inlet port 2 and is continuously guided through the separation flow channel 5 of the micro flow system 1 by two guiding buffers 10 and 11, each of which enters the separation flow channel through inlet ports 3 and 4, respectively. A field generating means comprising a magnet 8 is located adjacent to the flow channel 5 and generates a magnetic field across the flow channel 5. When the sample 9 containing particles passes the magnetic field, magnetically stained particles 12 are drawn to the guiding buffer 10 and leave the flow channel 5 together with the guiding buffer 10 through the sort outlet 6 while non-labeled cells 13 which are not influenced by the magnetic force remain in the fluid 9 leaving the flow channel 5 through the waste outlet 7 (column 12, line 62 - column 13, line 12).

Thus, *Blankenstein* merely discloses liquid flowing through a flow channel 5 and being influenced or not by a magnetic force 8 as it flows through the flow channel. However, as claimed in claims 17 and 23, movement of a conveyance means in a moving direction conveys the droplets by attraction to a magnetic field by the magnetic ultrafine particles mixed in the droplet. However, *Blankenstein* merely discloses a stationary magnet 8 while the particles are moving in a flowing liquid. In other words, the particles in *Blankenstein* are moved due to the

flow of liquid whereas in the claimed invention, the particles are moved by a moving magnetic field.

Ward, et al. appears to disclose a magnetic micro channel comprising gradient inducing features coded with magnetic materials. Fabrication methods used to fabricate channels may be used to fabricate gradient inducing features [0289]. As shown in Figure 7, negative mold 71 comprises ridges 72 and 74 defining valley 73 and pits 76 and 78. After negative mold 70 is formed, an injection molding process generates a device comprising a micro channel containing a dome structure. Ridges 72 and 74 correspond to resultant micro channels and pits 78 and 76 to a dome within each micro channel [0290].

Thus, *Ward, et al.* merely discloses how to form a device comprising a micro channel containing a dome structure. Nothing in *Ward, et al.* shows, teaches or suggests a conveyance means/unit which applies a magnetic field and moves in a direction such that a droplet, mixed with magnetic ultrafine particles, is conveyed in another liquid by applying the magnetic field to the magnetic ultrafine particles as claimed in claims 17 and 23. Rather, *Ward, et al.* merely discloses forming a device comprising a micro channel containing a dome structure.

A combination of *Blankenstein* and *Ward, et al.* would merely suggest to have a stationary magnet 8 attract particles in a flow channel 5 as taught by *Blankenstein* and to form the flow channel as taught by *Ward, et al.* Thus, nothing in the combination of the references shows, teaches or suggests a conveyance means/unit applying a magnetic field and moving in a direction such that droplets, mixed with magnetic ultrafine particles, are conveyed in another liquid due to attraction to the magnetic field by the magnetic ultrafine particles as claimed in claims 17 and 23. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claim 17 and 23 under 35 U.S.C. § 103.

Claims 18-19, 21-22 and 24-28 depend from claim 17 and 23 and recite additional features. Applicants respectfully submit that claims 18-19, 21-22 and 24-28 would not have been obvious within the meaning of 35 U.S.C. § 103 over *Blankenstein* and *Ward, et al.* at least for the reasons as set forth above. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claims 18-19, 21-22 and 24-28 under 35 U.S.C. § 103.

Claims 20 and 26 were rejected under 35 U.S.C. § 103 as being unpatentable over *Blankenstein* in view of *Ward, et al.*

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. § 103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, since nothing in the combination of *Blankenstein* and *Ward, et al.* show, teach or suggest the primary features as claimed in claims 17 and 23, Applicants respectfully request the Examiner withdraws the rejection to claims 20 and 26 under 35 U.S.C. § 103.

Thus, it now appears that the application is in condition for a reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

CONCLUSION

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is requested to contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicants respectfully petition for an appropriate extension of time. The fees for such extension of time may be charged to Deposit Account No. 50-0320.

In the event that any additional fees are due with this paper, please charge our Deposit Account No. 50-0320.

Respectfully submitted,

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